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|-------------------------------|------------------------|---------------------|--|
| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/778,960 | LEHTOVIRTA ET AL. | |
| | Examiner | Art Unit | |
| | KHAWAR IQBAL | 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12-04-09.
2. ☒ The allowed claim(s) is/are 1-6, 8-10, 14-18, 20-21, 23-24, 26-34, 36-38, 40-43, 45 and 52.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>12-04-09</u> . 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|--|---|

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. John R. Lastova (Registration # 33,149) on 12-04-2009.

The application has been amended as follows:

In claim 1,

1. *(Currently Amended)* For use in a communication system where connections are established between an external network and users of mobile radio subscriber units by way of a radio access network and each established connection is handled by an associated data processing circuit, a method comprising:

detecting a failure in a data processing circuit indicating that the data processing circuit is not functioning and thus can no longer handle established connections;

identifying one or more established mobile radio subscriber unit connections being handled by the failed data processing circuit; [and]

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sending a message to a radio access network node identifying the one or more identified mobile radio subscriber unit connections[.,];

sending a list to the radio access network node identifying the one or more mobile radio subscriber units affected by the failed data processing circuit no longer functioning;

wherein the radio access network node is used to establish one or more radio access bearers associated with the one or more identified mobile radio subscriber unit connections,

wherein each mobile radio subscriber unit connection is active and ongoing, is associated with one or more radio access bearers, and carries information between the mobile radio subscriber unit user and another communicating entity coupled to the external network,

the method further comprising the radio access network node releasing all subscriber unit connections associated with the one or more mobile radio subscriber units in the list.

In claim 8,

8. *(Currently Amended)* The method in claim[s] 6 [or 7], further comprising:
indicating in the list whether a signaling connection associated with a mobile radio subscriber unit affected by the failed data processing circuit no longer functioning should be released or maintained.

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In claim 15,

15. *(Currently Amended)* For use in a communication system where connections are established between an external network and users of radio subscriber units by way of a radio access network and each established connection is controlled by an associated data processing device, a method comprising:

detecting a failure in a data processing device in a node where the failed data processing device is no longer functional and thus can no longer control any established connections, and

sending a message to a radio access network node identifying the failed data processing device,

sending a list to the radio access network node identifying the one or more mobile radio subscriber units affected by the failed data processing circuit no longer functioning; and

wherein the radio access network node releases mobile radio subscriber unit connections associated with the identified failed data processing device,

wherein the radio access network node is used to establish one or more radio access bearers associated with the one or more identified mobile radio subscriber unit connections,

wherein each mobile radio subscriber unit connection is active and ongoing, is associated with one or more radio access bearers, and carries

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information between the mobile radio user and another communicating entity coupled to the external network.

In claim 20,

20. *(Currently Amended)* The method in claim 15, [further comprising: generating a list identifying one or more radio subscriber units affected by the detected failure and] wherein the message sent to the radio access network node includes the list.

In claim 21,

21. *(Currently Amended)* For use in a radio communications system providing communications between an external network and radio units, a radio access network that establishes connections between the external network and users of the radio units, comprising:

a radio network control node for communicating with the external network;
and

a radio base station node coupled to the radio network controller configured to provide a radio interface with plural radio units,

wherein at least one of the radio network control and radio base station nodes includes multiple data processing devices, where each established connection is controlled by an associated data processing device, and when a

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failure is detected in one of the data processing devices such that a failed data processing device is no longer functional and thus can no longer control any established connections, the one node is configured to send a message to an other of the radio network control and radio base station nodes identifying one or more active and ongoing radio unit connections affected by the failure and including a list identifying one or more radio units affected by the detected failure,

wherein at least one of the radio network control and radio base station nodes is configured to establish one or more radio access bearers associated with the one or more identified mobile radio unit connections,

wherein each connection is active and ongoing, is associated with one or more radio access bearers, and carries information between the radio unit user and another communicating entity coupled to the external network,

wherein the other node is configured to release the one or more detected radio unit connections identified in the message.

In claim 23,

23. *(Currently Amended)* The radio access network in claim [22] 21, wherein the other node is configured to maintain one or more radio connections not determined to be affected by the detected failure.

In claim 26,

26. (*Currently Amended*) The radio access network in claim [25] 21, wherein the list includes identifiers for the one or more radio units affected by the detected failure and for the one or more radio unit connections affected by the detected failure.

In claim 34,

34. (*Currently Amended*) For use in providing communication connections between an external network and a user of a mobile subscriber unit, a core network node coupled to one or more radio access network nodes that communicate with mobile subscriber units over a radio interface, the core network node comprising:

multiple data processing devices for controlling established connections,

a controller configured to perform the following tasks:

detect a failure in the one of the data processing devices such that the failed data processing device is no longer functional and thus can no longer control any established connections;

determine one or more active and ongoing mobile subscriber unit connections affected by the detected failure; and

send a message to one or more radio access network nodes identifying the one or more affected mobile subscriber unit connections,

wherein the one or more radio access network nodes are configured to establish one or more radio access bearers associated with the one or more affected mobile subscriber unit connections,

wherein each mobile subscriber unit connection is active and ongoing, is associated with one or more radio access bearers, and carries information between the mobile subscriber unit user and another communicating entity coupled to the external network,

wherein the controller is configured (1) to generate a list identifying the one or more mobile subscriber units affected by the detected failure and one or more mobile subscriber unit connections affected by the detected failure and (2) to include the list in the message to the one or more other radio access network nodes,

wherein the list is used to release all mobile subscriber unit connections associated with the one or more mobile subscriber units in the list.

In claim 36,

36. *(Currently Amended)* The network node in claim [35] 34, wherein the list includes identifiers for the one or more mobile subscriber units affected by the detected failure and for the one or more mobile subscriber unit connections affected by the detected failure.

In claim 37,

37. (*Currently Amended*) The network node in claim 34, wherein the controller is configured to generate a list identifying the one or more mobile subscriber units affected by the detected failure without identifying mobile subscriber unit connections.

In claim 38,

38. (*Currently Amended*) The network node in claim[s] 37, wherein the controller is configured to indicate in the list whether a signaling connection associated with a mobile subscriber unit affected by the detected failure should be released or maintained.

In claim 43,

43. (*Currently Amended*) For use in a communication system where connections are established between an external network and users of radio subscriber units by way of a radio access network and each established connection is handled by one of multiple data processing circuits in a radio access network node, apparatus in the radio access network node comprising:
means for determining one or more active and ongoing radio subscriber unit connections affected by a failure detected in one of the multiple data

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processing circuits indicating that the data processing circuit is not functioning and thus can no longer handle established connections, and

means for sending a message to a core network node identifying the one or more affected established radio subscriber unit connections that can no longer be handled by the failed data processing device and including a list identifying the one or more mobile radio subscriber units affected by the failed data processing device.

wherein each established radio subscriber unit connection is active and ongoing, is associated with one or more radio access bearers established through the radio access network node, and carries information between the radio subscriber unit user and another communicating entity coupled to the external network,

means for releasing the one or more affected radio subscriber unit connections identified in the message.

In claim 45,

45. *(Currently Amended)* A system including the apparatus in claim [44] 43, further comprising:

means for maintaining one or more radio subscriber connections not determined to be affected by the detected failure.

Claims 7, 22, 25, 35 and 44 have been canceled.

Allowable Subject Matter

2. Examiner's Statement of Reasons for Allowance:

3. Claims 1-6, 8-10, 14-18, 20-21, 23-24, 26-34, 36-38, 40-43, 45 and 52 are allowed. The following is a statement of reasons for the indication of allowable subject matter: Gomez (6178327) teaches for use in communication system where connections are established between an external network and users of mobile radio subscriber units by way of a radio access network and each established connection is handled by an associated data processing circuit, a method comprising: detecting a failure in a data processing circuit indicating that the data processing circuit is not functioning and thus can no longer handle established connections, identifying one or more established mobile radio subscriber unit connections being handled by the failed data processing circuit and sending a message to a radio access network node identifying the one or more identified mobile radio subscriber unit connections; wherein each mobile radio user connection is active and ongoing, is associated with one or more radio access bearers, and carries information between the mobile radio subscriber unit user and another communicating entity coupled to the external network. Tamura et al (20070298804) teaches wherein the radio access network node is used to establish one or more radio access bearers associated with the one or more mobile radio subscriber unit connections. Tamura et al further teaches the functional model of a part of the invented system for describing an abnormal release caused from a radio link failure detected by a mobile terminal and/or network and the abnormal release caused from the radio link failure detected by

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the mobile terminal and/or network. FIG. 355 is a table representing the detail of a RADIO LINK FAILURE response confirmation that is a response confirmation of the RADIO LINK FAILURE request indication. Davidson et al (6408182) teaches telecommunications network architecture comprises an IP communications network in which transmission and control paths are logically separated, with mobile switching centers (MSCs) and base station controllers (BSCs). The BSCs have an alternative MSC list identifying backup MSCs for each cell in the BSC coverage area. A guard timer determines no acknowledgement by the primary MSC and a Complete Layer 3 message is sent to the backup MSC with an indication that the BSC is now reporting to the backup MSC and it sends a location upgrade request to the home location register. Claims 1-6, 8-10, 14-18, 20-21, 23-24, 26-34, 36-38, 40-43, 45 and 52 are allowable over the prior art of record since the cited references taken individually or in combination (with combination of other limitations) fails to teach sending a list to the radio access network node identifying the one or more mobile radio subscriber units affected by the failed data processing circuit no longer functioning; the method further comprising the radio access network node releasing all subscriber unit connections associated with the one or more mobile radio subscriber units in the list.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAWAR IQBAL whose telephone number is (571)272-7909. The examiner can normally be reached on 9 am to 6.30 pm Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GEORGE ENG can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/K. I./
Examiner, Art Unit 2617

